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NATIONAL PHOTOGRAPHIC
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**PHOTOGRAPHIC
INTERPRETATION
REPORT**

**OBSTACLE COURSES ASSOCIATED WITH
SOVIET MISSILE UNITS**

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OBSTACLE COURSES ASSOCIATED WITH SOVIET MISSILE UNITS**ABSTRACT**

1. Three distinctive types of obstacle courses, each associated with a different type of missile unit have been identified on large scale photography of the USSR. These courses are found at installations with strategic, tactical, and defensive missile units, which are subordinate to the Soviet Rocket Forces, Soviet Ground Forces, and Soviet Air Defense Forces (PVO Strany), respectively.

2. This report describes the three types of obstacle courses and provides overall measurements, perspective drawings, and photographs of representative courses.

INTRODUCTION

3. Three distinctive types of obstacle courses, each associated with a different type of missile unit, have been identified on large scale photography of the USSR. These courses are found at installations with strategic, tactical, and defensive missile units, which are subordinate to the Soviet Rocket Forces, Soviet Ground Forces, and Soviet Air Defense Forces (PVO Strany), respectively.

4. These obstacle courses have also been identified at many missile support areas in the USSR. The presence of a particular type of obstacle course at an unidentified installation may provide the photointerpreter with an early indication of the function of the installation. In addition, the modification of an existing obstacle course can indicate a functional change within an installation.

5. The clearest examples of missile unit and obstacle course relationships are found at missile test centers. At Kapustin Yar/Vladimirovka Missile Test Center all three types of obstacle courses and missile units have been identified.

BASIC DESCRIPTION**Soviet Rocket Forces Obstacle Course**

6. The Soviet Rocket Forces (SRF) obstacle course has been identified at most of the major support facilities for MRBM, IRBM, and ICBM complexes and at the three offensive missile test centers: Tyuratam, Plesetsk, and Kapustin Yar/Vladimirovka. The SRF obstacle course is of two lengths, 95 by 15 meters (311 by 49.2 feet) and 200 by 15 meters (656 by 49.2 feet), and consists of seven or eight obstacles (Figure 1). Two of the obstacles--the catwalk and the simulated missile section--are found only at SRF courses. The SRF obstacle course is the most definitive as an identification aid of the three courses described.

Motorized Rifle Obstacle Course

7. The Soviet tactical missile units use the motorized rifle obstacle course (Figure 2). The course is approximately 200 by 15 meters (656 by 49.2 feet). It has the most obstacles of the three courses discussed in this report. Although the perspective drawing shows all of the obstacles commonly seen at a motorized rifle course, one course may not necessarily have all of these obstacles. The ditch with logs, the crawl barrier, the log pile, the pocket, and the building facade are unique to this course.

8. Tactical surface-to-surface missile (SSM) units, which include SCALEBOARD (SS-2), SHADDOCK (SSC-1A), SCUD (SS-1), and FROG, and tactical surface-to-air missile (SAM) units, which include GANEF (SA-4) and GAINFUL (SA-6), use the motorized rifle obstacle course. (The tactical SAM units are reported to be under the control of PVO Voysk, rather than PVO Strany.)¹

9. This course, as the name implies, has also been observed with motorized rifle units and with Committee on State Security (KGB) troops.²

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Soviet Air Defense Forces (PVO Strany) Obstacle Course

10. The obstacle course used by missile units subordinate to PVO Strany is the most basic of the three courses discussed. It is 93 by 15 meters (305.1 by 49.2 feet) and has seven obstacles (Figure 3). At least one Soviet publication has indicated that this course is for all forms of armed forces and all kinds of troops.³ Obstacle courses found at SA-1, SA-2, SA-3, SA-5, and ABM missile facilities, SAM support barracks, and SAM training areas are of this type. This course has also been observed at other facilities: PVO-controlled airfields, air warning radar sites, HEN HOUSE radar sites, some communications sites, and downrange missile tracking facilities.

Obstacle Courses as Indicators of the Function of an Installation

11. The best example of an obstacle course reflecting the function of an installation is found at Kapustin Yar/Vladimirovka Missile Test Center. In the SAM launch complex there are three PVO Strany courses: one in the marshaling area, one in the base support complex, and one in the SAM housing area. In the areas built and maintained by the SRF (the SSM bivouac area and launch complexes A and C) there are SRF courses. The short range (tactical) ballistic missile training area, where tactical SSM training has taken place, has a motorized rifle obstacle course.

12. The function of other Soviet missile centers is also reflected by the presence of specific types of obstacle courses. At Tyuratam Missile Test Center and Plesetsk Missile and Space Center courses of the SRF type have been identified at the launch complexes. Only PVO Strany courses are found at Sary-Shagan Missile Test Center, Ashuluk SAM Firing Range, Antipinskoye SAM Training Area, and Sasyktau SAM Research and Development Area. Motorized rifle courses are located at Emba Missile Test Center, where research and development and crew training for the SA-4 and SA-6 are conducted.

13. The modification or dismantling of an existing obstacle course or the construction of a different type of obstacle course can indicate a functional change at an installation. Motorized rifle obstacle courses were installed at Sary-Ozek IRBM Complex, Drovyanaya and Novosibirsk ICBM Complexes, and Manzovka MRBM Complex when SCALEBOARD and SHADDOCK units were deployed at these installations.

14. At the former Simferopol MRBM and Novosysoyevka IRBM Complexes motorized rifle courses were installed following the removal of MRBM and IRBM equipment and the deployment of SCALEBOARD. The SRF courses at Simferopol were razed and a motorized rifle course was installed. At Novosysoyevka motorized rifle obstacles were added to the existing SRF obstacle courses (Figure 4). The motorized rifle course at Manzovka was razed when the SCALEBOARD unit moved, possibly to Novosysoyevka.

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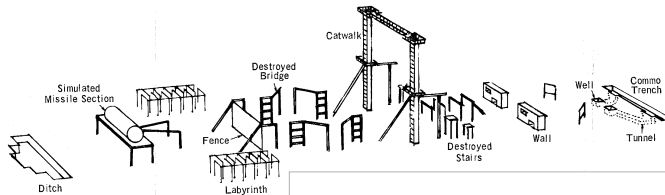
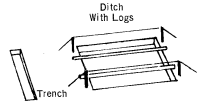


FIGURE 1. PERSPECTIVE DRAWING OF A TYPICAL SRF OBSTACLE COURSE AND PHOTOGRAPH OF SRF OBSTACLE COURSE AT YURYA ICBM COMPLEX HEADQUARTERS



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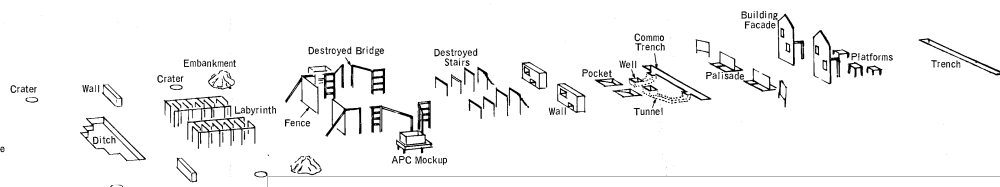


FIGURE 2. PERSPECTIVE DRAWING OF A TYPICAL MOTORIZED RIFLE OBSTACLE COURSE AND PHOTOGRAPH OF MOTORIZED RIFLE OBSTACLE COURSE AT NERCHINSK TACTICAL SSM BARRACKS AL-1



FIGURE 3. PERSPECTIVE DRAWING OF A TYPICAL PVO STRANY OBSTACLE COURSE AND PHOTOGRAPH OF PVO STRANY OBSTACLE COURSE AT SARY-SHAGAN MISSILE TEST CENTER

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MAPS OR CHARTS

Various US Air Target Charts, Series 200, scale 1:200,000

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